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(54) **OPTICAL SYSTEM, COMPRISING A MICROSCOPY SYSTEM AND AN OCT SYSTEM**

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See application file for complete search history.

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(57) **ABSTRACT**

The disclosure relates to an optical system for inspecting an eye, having an OCT system which is configured to generate a measurement beam, which is incident on an object region in a converging manner to form a measurement focus. The OCT system has a beam expander which is disposed along the measurement beam between the scanning system and the objective lens and generates an intermediate focus between the scanning system and the objective lens. The OCT system is configured to generate different values of a beam waist diameter of the beam waist by means of controlling the controllable beam expansion of the beam expander. At the different values of the beam waist diameter, an axial beam waist position of the beam waist is substantially identical.

24 Claims, 7 Drawing Sheets

